International Application No PCT/GB 02/04691

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G05B19/418 B230 B23Q17/24 B23Q9/00 B25J9/16 G05B19/404 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) B23Q B25J G05B IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. US 5 148 591 A (PRYOR TIMOTHY R) 1 - 11X 22 September 1992 (1992-09-22) the whole document Χ EP 0 320 315 A (NISSAN MOTOR) 1,2,4, 14 June 1989 (1989-06-14) 6-8 the whole document X US 5 380 978 A (PRYOR TIMOTHY R) 1,6,10 10 January 1995 (1995-01-10) the whole document X US 6 282 455 B1 (ENGDAHL JONATHAN R) 10,11 28 August 2001 (2001-08-28) abstract -/--Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents : "T" tater document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the *A* document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the International "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the International filing date but later than the priority date claimed '8' document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 21 March 2003 08/04/2003 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nt, Fax: (+31-70) 340-3016

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT Category & Casting of document, with indicating authors appropriate of the relevant researces. Relevant to claim					
Category °	Citation of document, with indication where appropriate, of the relevant passages	Relevant to claim No.			
x	EP 0 812 662 A (FANUC LTD) 17 December 1997 (1997-12-17) the whole document	1,6			
:					

International Application No PCT/GB 02/04691

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5148591	A	22-09-1992	DE	3241510 A1	10-05-1984
			US	4453085 A	05-06-1984
			US	4482960 A	13-11-1984
			US	4769700 A	06-09-1988
			US	6314631 B1	13-11-2001
			US	5608847 A	04-03-1997
			US	6163946 A	26-12-2000
			US	6301763 B1	16-10-2001
			US	5602967 A	11-02-1997
			US	6167607 B1	02-01-2001
			US	6317953 B1	20-11-2001
			US	4788440 A	29-11-1988
			US	4602163 A	22-07-1986
EP 0320315	Α	14-06-1989	JP	1153388 A	15-06-1989
			JP	2105902 C	06-11-1996
			JP	8015877 B	21-02-1996
			DE	3883356 D1	23-09-1993
			DE	3883356 T2	02-12-1993
			EP	0320315 A1	14-06-1989
			US	5010634 A	30-04-1991
US 5380978	A	10-01-1995	WO	9301080 A1	21-01-1993
		•	EP	0592585 A1	20-04-1994
US 6282455	B1	28-08-2001	NONE		
		17-12-1997	EP	0812662 A1	17-12-1997
EP 0812662					
EP 0812662	^	1, 12 100,	US	5987591 A	16-11-1999